



Armed Forces College of Medicine AFCM



lateral

Lateral side of leg and • dorsum of foot

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INTENDED LEARNING OBJECTIVES (ILO)



By the end of this lecture the student will be able to:

- ❑ Describe the attachments, action and nerve supply of muscles of lateral side of leg and dorsum of foot
- ❑ Define attachment and structures passing behind peroneal retinacula
- ❑ Describe root value, origin, course and branches of superficial peroneal nerve
- ❑ State beginning, course and branches of dorsalis pedis artery & its clinical significance

Lecture Plan

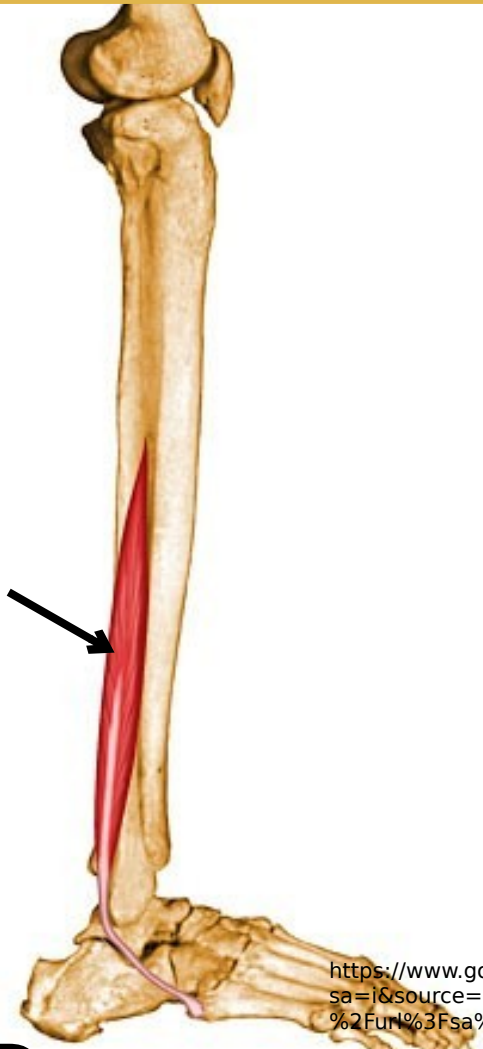


1. Part 1 : lateral compartment of leg, peroneus longus and brevis, superficial peroneal nerve, Peroneal retinacula & Dorsum of foot
2. Summary
3. Quiz

lateral compartment muscles :Peroneal muscles

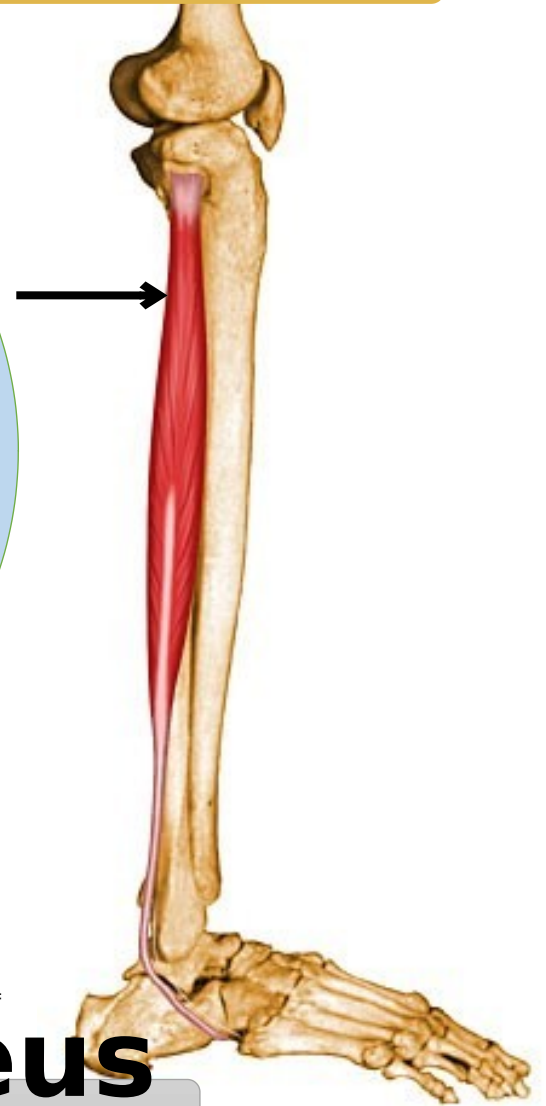


From the lower 2/3 of the lateral side of the fibula



Peroneus brevis

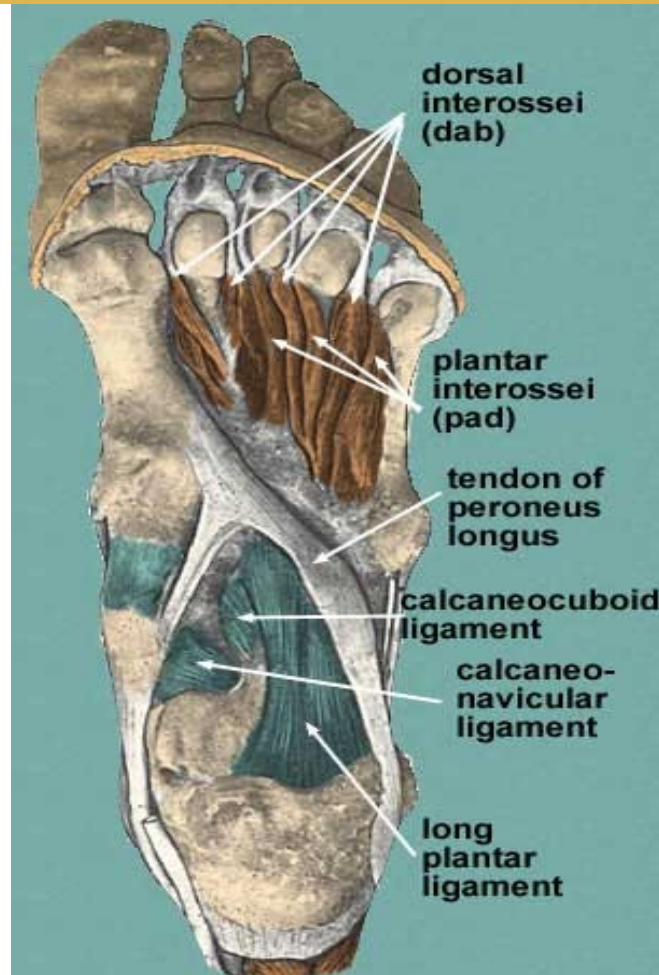
From the lateral side of the head of fibula + upper 2/3 of the lateral surface of fibula



Peroneus longus

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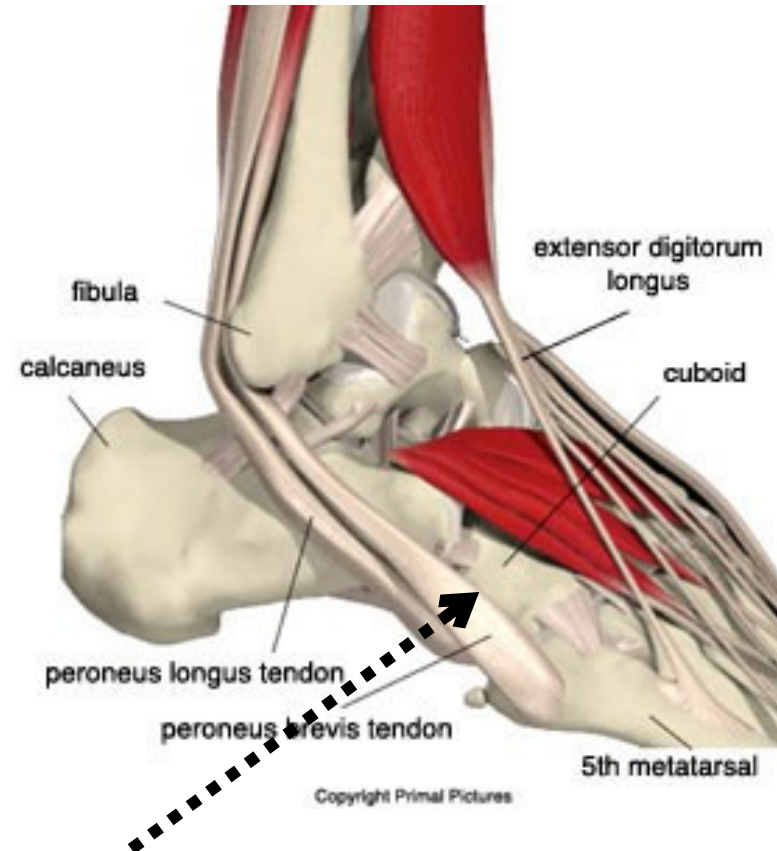
Peroneal muscles



<https://www.google.com/url?sa=i&source=images&cd=&cad=rja&uact=8&ved=2ahUKEwiwpayx46jiAhXBalAKHWzgBGsQjRx6B>

The tendon of **peroneus longus** inserted into the planter surface of the base of the **1st metatarsal** bone and **medail cuneiform** bone.

Peroneal muscles



The tendon of **peroneus brevis** inserted into the lateral side of the base of the **5th metatarsal** bone .

Action of Peroneal muscles



Peroneus longus and brevis evert foot

Peroneus longus supports the arches of foot
Peroneus brevis prevents over inversion



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Superficial peroneal nerve

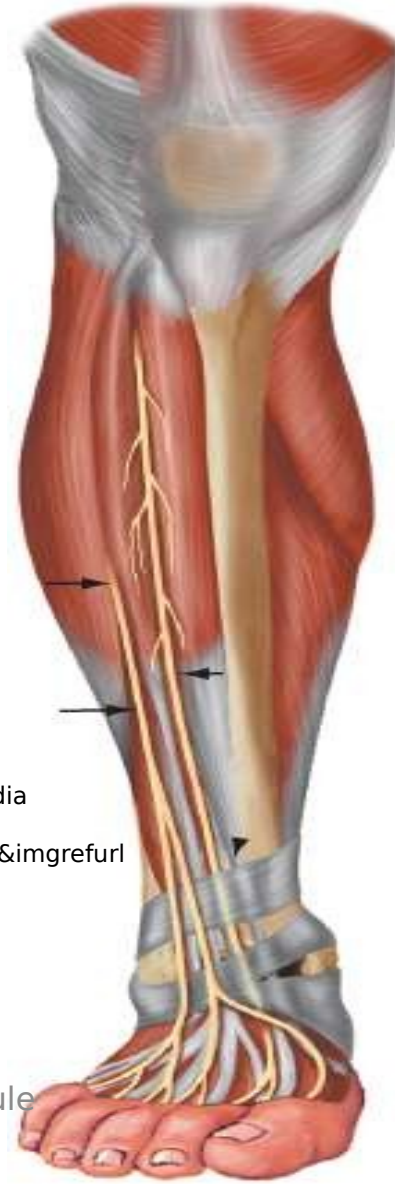


❖ One of the two terminal branches of the **common peroneal nerve**.

❖ Begin at the lateral side of the neck of fibula and ends in the distal part of the leg by

dividing into **medial and lateral branches**.

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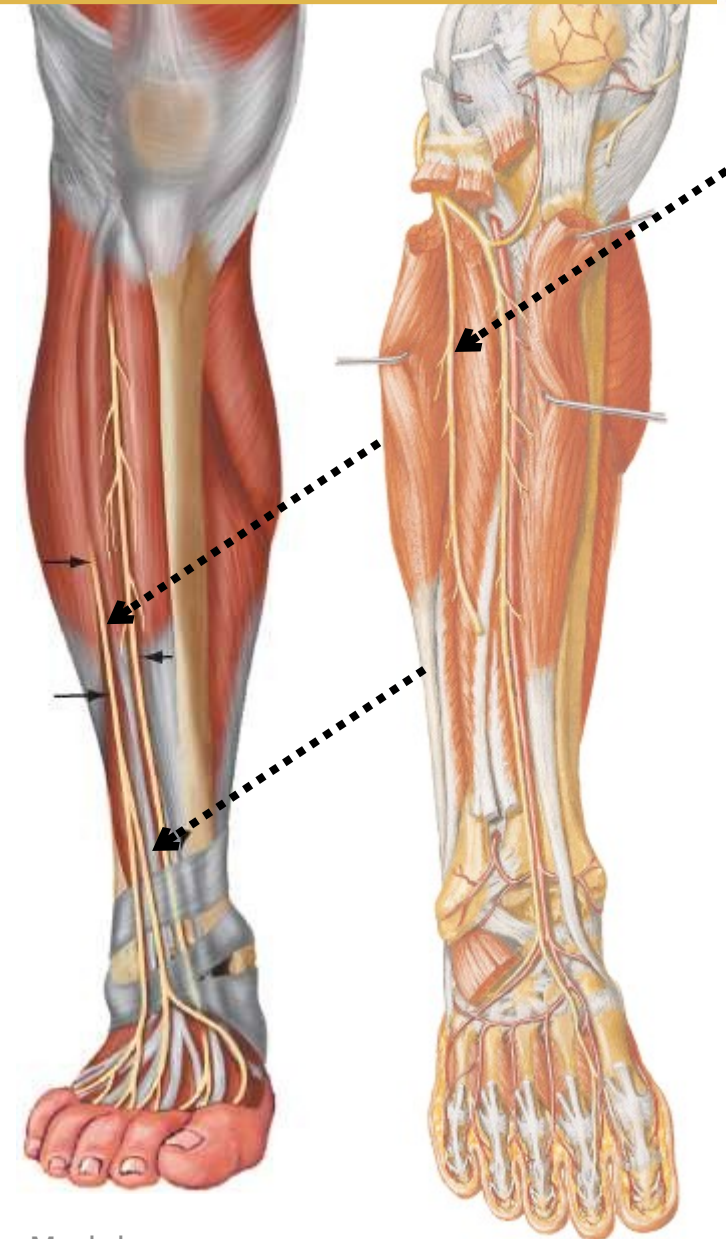
Superficial peroneal nerve



❖ **Upper 1/3** of the leg
.....in the substance of
peroneus longus.

❖ **Middle 1/3**
.....between peroneus
longus & brevis .

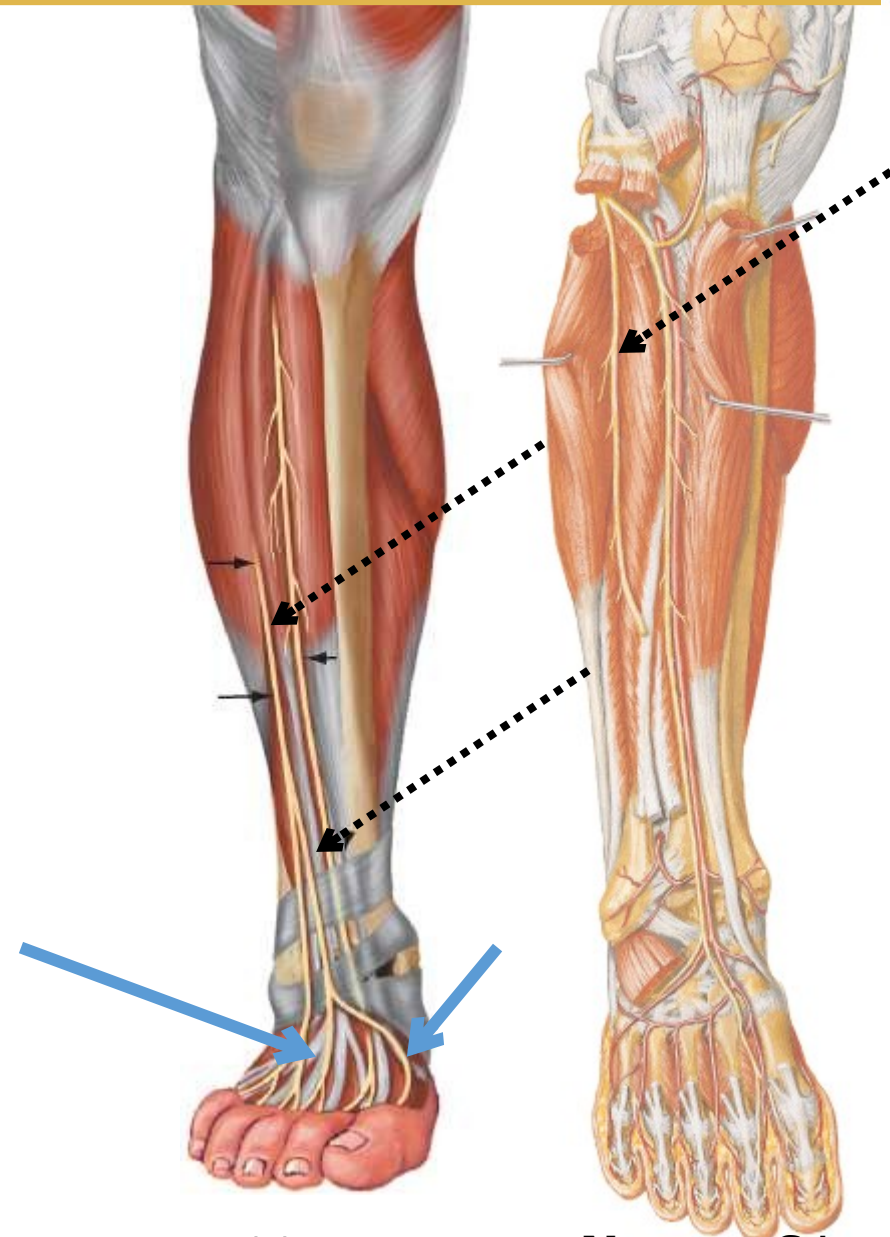
❖ **Lower 1/3**emerges
between the 2 muscles
& pierce the deep fascia
and divide into medial and
lateral terminal branches



Branches of Superficial peroneal nerve



- ❖ Muscular
- ❖ Cutaneous to
Skin of lower lateral side of
leg and intermediate area
of dorsum of foot
- ❖ Medial side of big toe
- ❖ Adjacent sides of
2 and 3rd toes
3 and 4th toes
4 and 5th toes



Peroneal retinaculum



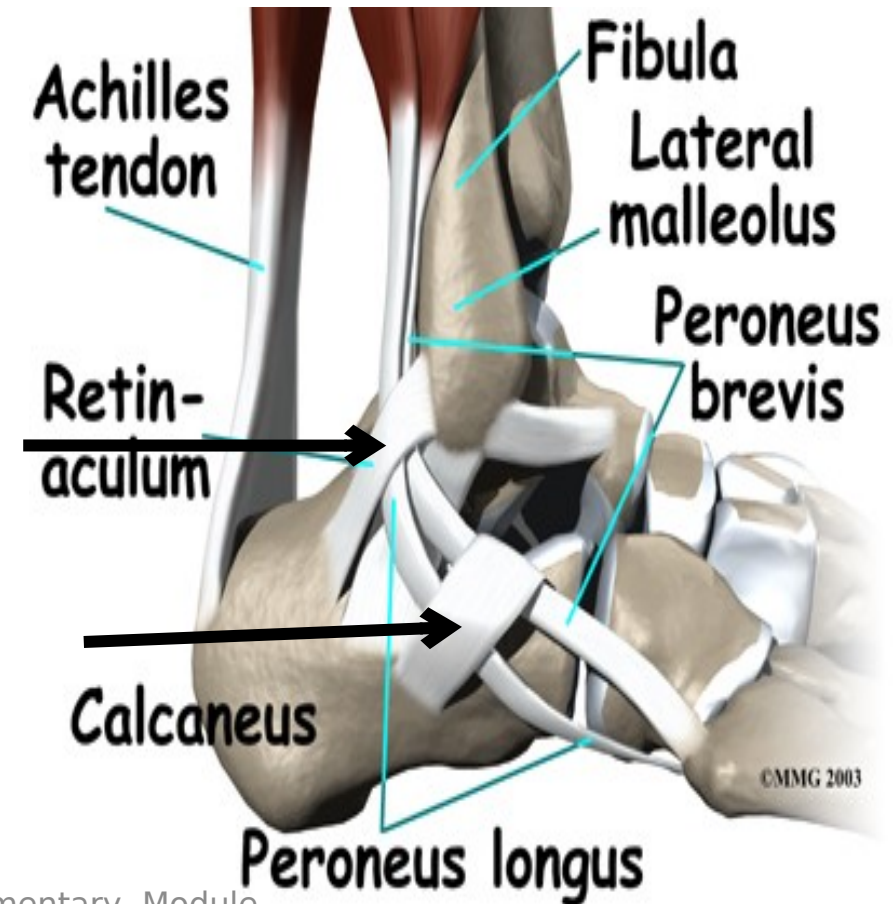
Superior peroneal retinaculum :

Extends from back of lateral malleolus to lateral aspect of calcaneus
Has a single compartment.

Inferior peroneal retinaculum :

Extends from superior to lateral surface of calcaneus.

Has two compartments

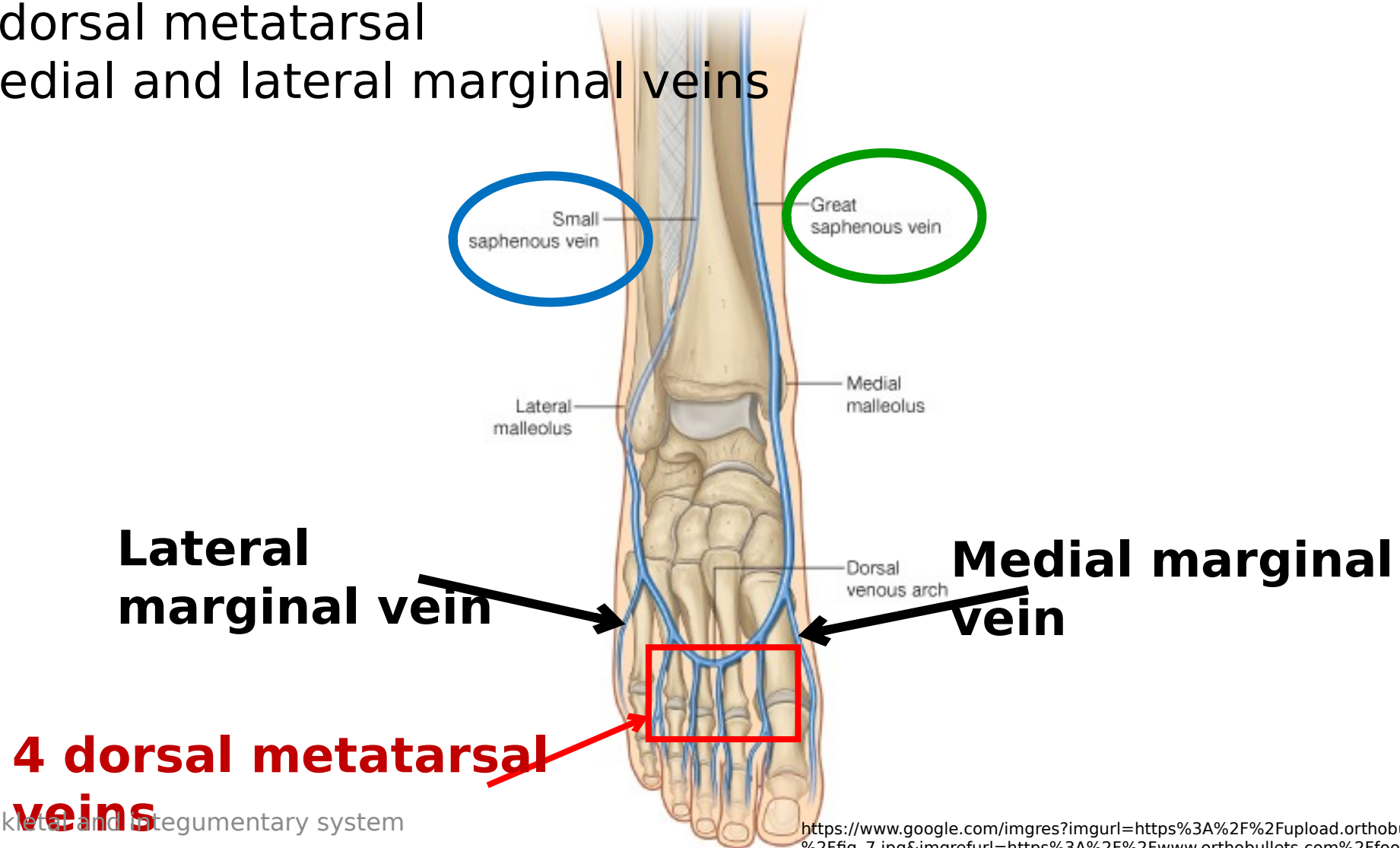


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Dorsal venous arch



Lies at level of proximal metatarsal
Receives 4 dorsal metatarsal
Receives medial and lateral marginal veins



Extensor digitorum brevis



Origin :

From upper surface of calcaneus & stem of inferior extensor retinaculum

Insertion :

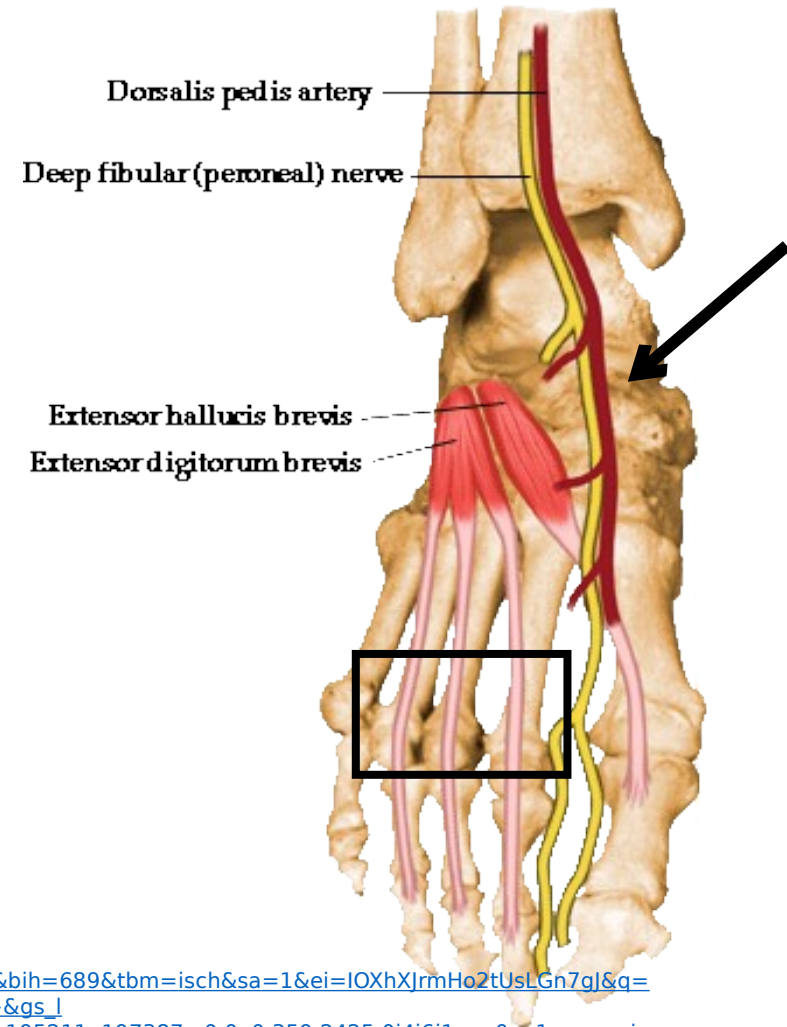
By 4 tendons into the medial 4 toes.

One for proximal phalanx of big toe...extensor hallucis brevis

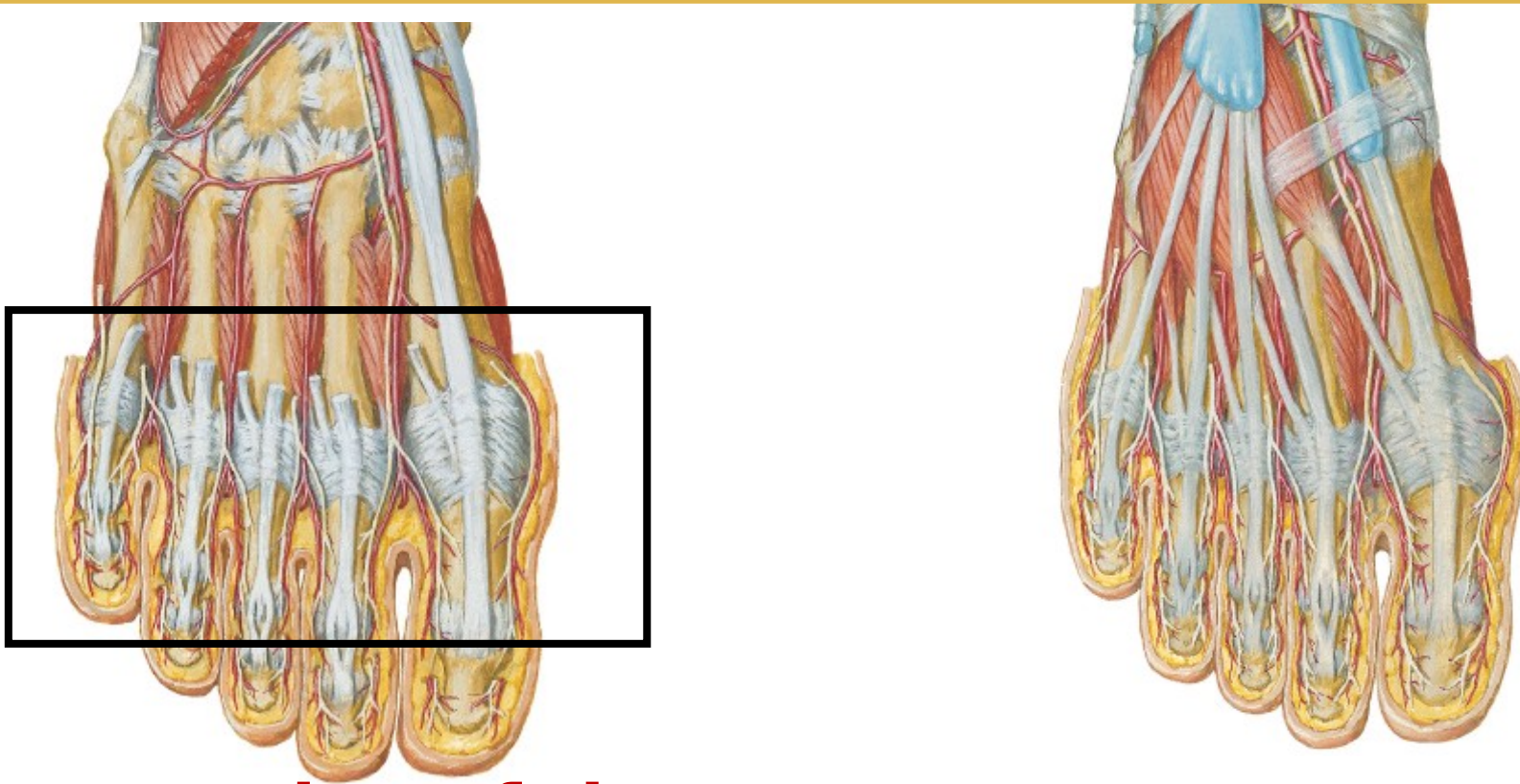
Lateral 3 tendons join the extensor expansion

Nerve supply :

Deep peroneal nerve



Extensor expansion



Extensor expansion of the toes:

Union of the tendons of extensor digitorum longus & brevis to form expansions for the 2nd, 3rd and 4th toes on the dorsum of proximal phalanges

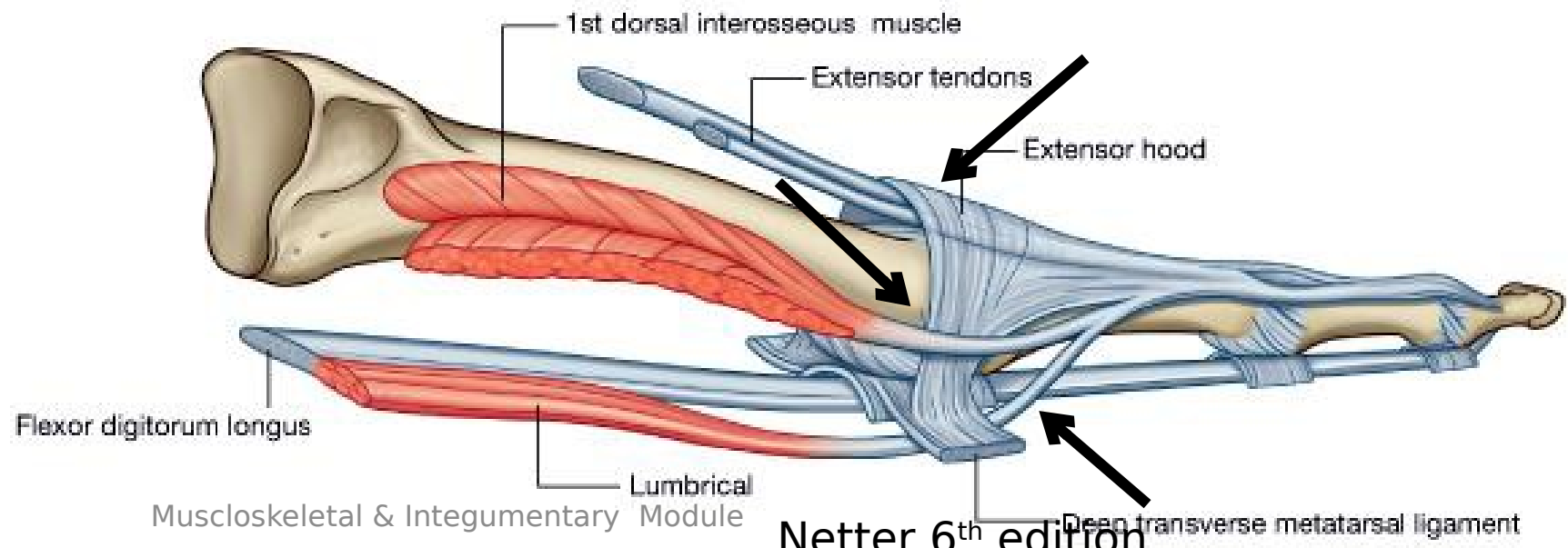
Extensor expansion



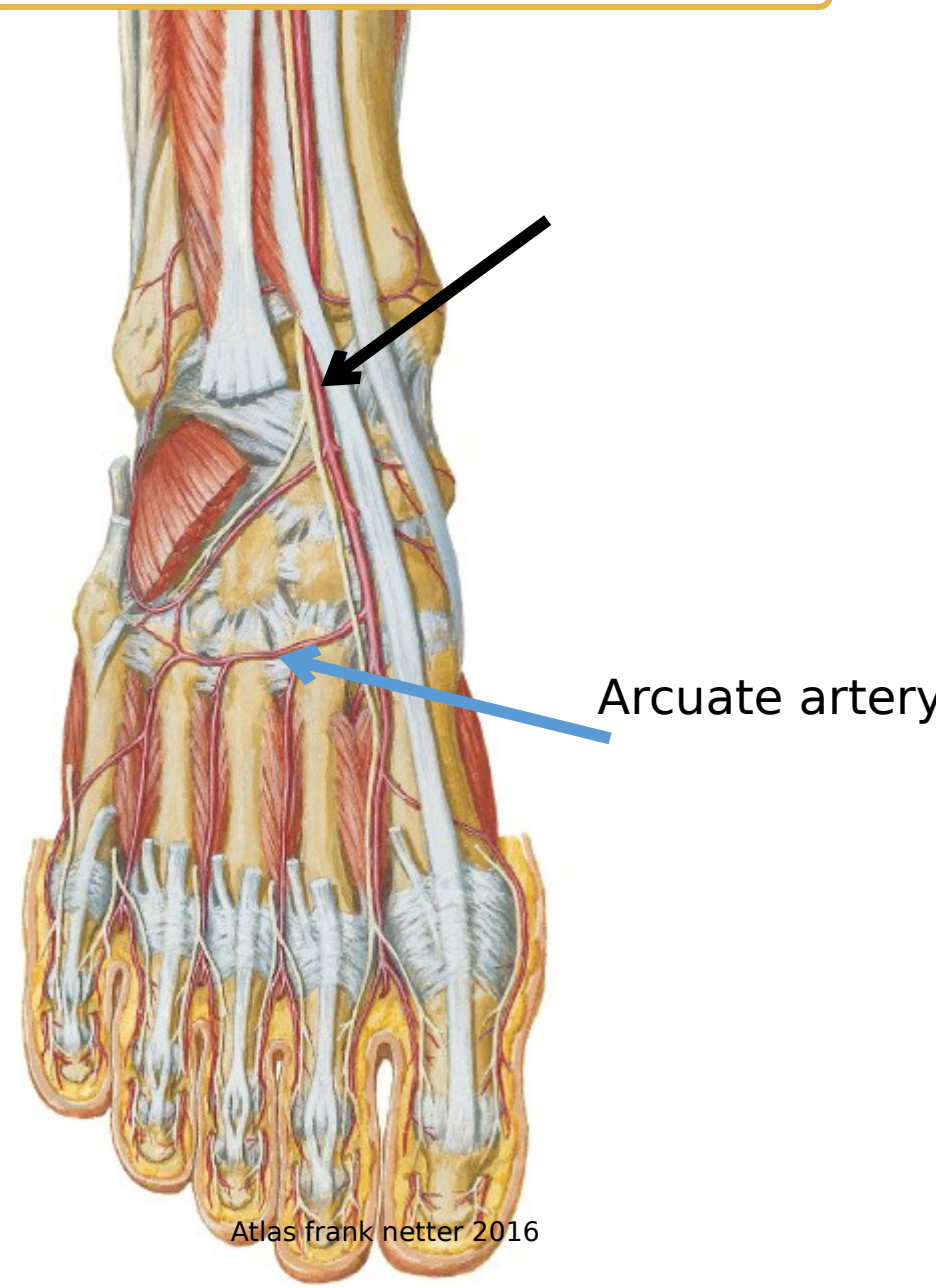
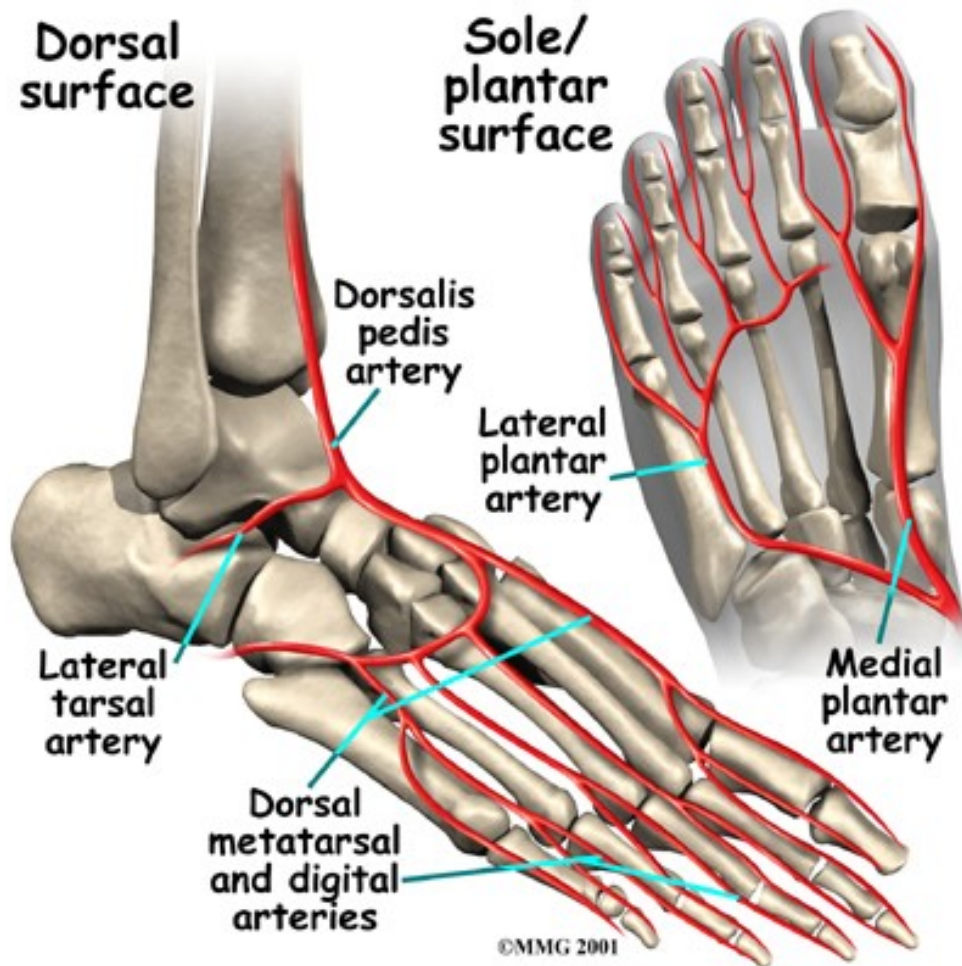
Each expansion is joined by one lumbrical and 2 interossei muscles which pass across the sides of the metatarsophalangeal joints from the sole of the foot.

Each expansion a pro interphalangeal joint into 3 slips; the inter attached to the base middle phalanx and t collaterals reunite or of the middle phalanx attached to the base distal phalanx

Dorsal interossei



Dorsalis pedis artery



Dorsalis pedis artery



It is the continuation of the anterior tibial

Surface anatomy:

The pulsation of the dorsalis pedis artery is palpable from the midpoint between the 2 malleoli to the proximal end of the 1st intermetatarsal

Course & Termination:

Medial : tendon of extensor hallucis longus

Lateral : terminal branch of deep peroneal nerve

It passes between the 2 heads of the 1st dorsal interosseous muscle at the proximal end of the 1st intermetatarsal space into the sole of the foot where it completes the plantar arch.



Branches

A- lateral tarsal

B- Medial tarsal

C- first dorsal metatarsal

D- arcuate artery : at base of metatarsal bones gives 2, 3, 4 dorsal metatarsal arteries and gives dorsal digital arteries

Lecture Quiz



Question 1 A patient lost the ability to evert his foot the lesion affected which of the following muscles

- a) Tibialis anterior
- b) Peroneus longus
- c) extensor hallucis

Question 2

Compare branches of anterior tibial nerve and superficial peroneal nerve

Question 3

Which muscles share in formation of extensor retinaculum

SUGGESTED TEXTBOOKS



1. (Regional anatomy by Richard snell 9th edition)